

# GOST 2019-75 Standard 99.98% Ni200/Ni201/Np1/Np2 Russian Pure Nickel Wire

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| basic information           |  |
|-----------------------------|--|
| Place of Origin:            | China  |
| Brand Name:                 | Victory  |
| Model Number:               | Ni200 Ni201  |
| Minimum Order     Quantity: | 5 Kg   |
| Price:                      | 5 - 99 kilograms US\$45.00   |
| Packaging Details:          | Plastic film or waterproof woven bag inside,<br>wire packed in spool put into carton,coil wire<br>or strip wire put into wooden case |
| Delivery Time:              | 7 to 20 Days   |
| Payment Terms:              | L/C, T/T, Western Union, MoneyGram   |
|                             |  |

300 tons per month



14

1.11.

# **Product Specification**

• Supply Ability:

| Standard:  | ASTM B164, DIN 17752, JIS NW2200            |
|--|---|
| Grade Type:  | N4, N6, Ni200, Ni201                        |
| Material:  | Ni  |
| • Ni(min):   | 99%   |
| Melting Point:                                     | 1435-1446°C                                 |
| <ul> <li>Elongation (≥ %):</li> </ul>              | 35%   |
| Shape:   | Wire  |
| <ul> <li>Ultimate Strength (≥<br/>MPa):</li> </ul> | 462   |
| Application:                                       | Battery Pack, Electric Apparatus, Computers |
| • Size:  | 0.025-10mm, Can Customized                  |
| Technique:   | Cold Rolled, bending, cutting, decoiling    |
| • Density(g/cm3):                                  | 8.9   |



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# **Product Description**

## **Product Description:**

Pure nickel wire is a wire-shaped product made of high-purity nickel material. It has excellent corrosion resistance, high temperature stability, excellent electrical conductivity and mechanical strength. Available in a wide range of diameters, they can be customized as needed and are suitable for electronics, electrical, heating, automotive, chemical and medical applications.

Pure nickel wire can be used to manufacture resistors, inductors, heaters, fuel nozzles, medical equipment and other products, as well as chemical equipment, catalyst supports and electrolytic cells. Manufacturers can customize the diameter, length, chemical composition, surface treatment and other characteristics of pure nickel wire according to customer needs. Pure nickel wire has good corrosion resistance and can remain stable in high temperatures and corrosive environments. It also has a low linear expansion coefficient and good resilience. Whether in terms of product quality or customized needs, pure nickel wire provides reliable solutions and is widely used

## Thermal expansion coefficient of nickel wire:

Physical properties: Pure nickel wire has good ductility and plasticity and can be easily drawn into filaments. Its diameter can be very small, ranging from a few microns to a few millimeters.

Chemical properties: Pure nickel wire has good corrosion resistance to most common chemicals. It has good stability to water, air and most acids at room temperature. However, under high temperature and strong oxidizing conditions, pure nickel wire may undergo oxidation reactions.

Thermal properties: Pure nickel wire has a high melting point (about 1455 degrees Celsius) and a low linear expansion coefficient. This makes pure nickel wire have good stability and heat resistance in high temperature environments.

Application areas: Pure nickel wire is widely used in many fields. It is often used as a material for resistance wires, heating wires and heating elements. Pure nickel wire is also widely used in the chemical industry, electronics industry, aerospace and medical fields.

#### Features:

Product Name: Nickel Wire Material: Ni Standard: ASTM B164, DIN 17752, JIS NW2200 Ultimate Strength (≥ MPa): 462 Product name: Pure Nickel Wire Grade: N4.N6.Ni200.Ni201 Product Features: Pure nickel wire with a material of Ni Complies with ASTM B164, DIN 17752, JIS NW2200 standards Ultimate strength of at least 462 MPa Available in various grades: N4, N6, Ni200, Ni201 Diameter options: 0.025 mm, 0.05 mm, 0.1 mm

## **Technical Parameters:**

| Specifications    | Values              |  |  |  |  |
|-------------------|---------------------|--|--|--|--|
| Product name      | Pure Nickel Wire    |  |  |  |  |
| Ni(min)           | 99%                 |  |  |  |  |
| Grade             | N4,N6,Ni200,Ni201   |  |  |  |  |
| Size              | 0.025-10mm          |  |  |  |  |
| Shape             | Wire                |  |  |  |  |
| Hardness          | S,1/4H,1/2H,3/4H,H  |  |  |  |  |
| Melting Point     | 1435-1446°C         |  |  |  |  |
| Elongation (≥ %)  | 35%                 |  |  |  |  |
| Resistance (μΩ.m) | 15                  |  |  |  |  |
| Application       | Industry,Electronic |  |  |  |  |

| Grade | Ni+Co | Cu    | Si    | Mn    | С     | Mg   | S     | Р     | Fe    |  |
|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|--|
| N4    | 99.8  | 0.015 | 0.03  | 0.002 | 0.01  | 0.01 | 0.001 | 0.001 | 0.04  |  |
| N6    | 99.6  | 0.10  | 0.10  | 0.05  | 0.10  | 0.10 | 0.005 | 0.002 | 0.10  |  |
| Ni201 | ≥99.0 | ≤0.25 | ≤0.35 | ≤0.35 | ≤0.02 | /    | ≤0.01 | /     | ≤0.40 |  |
| Ni200 | ≥99.2 | ≤0.25 | ≤0.35 | ≤0.35 | ≤0.15 | /    | ≤0.01 | /     | ≤0.40 |  |

#### For more details, pls directly contact us.

#### Application:

The thermal expansion coefficient of pure nickel wire may be somewhat different compared to other materials. The coefficient of thermal expansion is a material property that describes the rate of dimensional change of a material as a result of temperature changes. Pure nickel generally has a higher coefficient of thermal expansion relative to other common engineering materials such as steel, aluminum and copper. This means that under the same temperature change conditions, the length or volume change rate of pure nickel wire may be higher.

Specifically, the following is the approximate range of the thermal expansion coefficient of some common materials (taking the linear expansion coefficient as an example, the unit is 10^-6/°C):

Pure Nickel: 13.3 - 14.3 Steel: 10 - 13

Aluminum: 22 - 24 Copper: 16 - 18

It can be seen that pure nickel has a higher thermal expansion coefficient compared to steel and copper. This means that under the same temperature change, the length change rate of pure nickel wire may be greater, so more attention needs to be paid to the impact of thermal expansion when applied in high temperature environments

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### FAQ:

What are the surface treatment methods for pure nickel wire? Common surface treatment methods for pure nickel wire include pickling, electroplating, chemical treatment and mechanical polishing to obtain the required surface quality and finish.

How is pure nickel wire packaged?

Pure nickel wire is usually supplied in coils, rolls or bundled packages to ensure it remains in good condition during transportation and storage.

What is the thermal conductivity of pure nickel wire? The thermal conductivity of pure nickel wire is about 70 W/(m·K) and has good thermal conductivity.

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